

Group 1. Mining, U.S. and Worldwide Supply of Phosphorus

Part 1. Expansion of a Florida phosphate mine

Read *The Dispute over South Meade Mine*, then answer the questions below.

1. After the July 2010 injunction, Mosaic threatened to close the South Fort Meade mine. But they never did. Why do you think they made such a threat but didn't carry it out?
2. The following are stakeholders in this story: Mosaic Corporation, people who work for Mosaic, farmers, Army Corps of Engineers, Sierra Club, wildlife, people in counties along Peace River, people who pursue recreation outdoors (e.g., hunters, anglers, bird watchers). Decide whether each stakeholder is pro-expansion, anti-expansion, or indifferent. Then explain why each is pro- or anti-expansion.

Part 2. U.S. and global supply and demand

3. According to the U.S. Census Bureau, the U.S. population was 308,750,000 in 2010. According to the U.S.G.S., the U.S. 2010 apparent consumption of phosphorus was 30,500,000 metric tons. How much phosphorus is consumed per capita (per person) in the U.S.?
4. In 2010, the world population was about 6,790,000,000 according to the United Nations. The world production (and consumption) of phosphorus was 181,000,000 metric tons (U.S.G.S). How much phosphorus is consumed per capita (per person) in the world?
5. Why are these numbers not the same? (Why doesn't the average American consume the same amount of phosphorus as the average Earthling?)
6. As of 2011, the United States had 1,400,000,000 metric tons of phosphate reserves. Assuming that consumption stays the same, for how many more years will the U.S. phosphate last?
7. The world's total resources of phosphorus are 300,000,000,000 metric tons. The known reserves are 71,000,000,000 metric tons (USGS Mineral Commodity Summary 2012). Assuming current world consumption rates, for how long will the world phosphate reserves last?